

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

Paper No. 13

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte TIMOTHY J. FULLER et al.

Appeal No. 2002-1097
Application No. 09/382,613

ON BRIEF

Before PAK, WARREN and WALTZ, **Administrative Patent Judges**.

WALTZ, **Administrative Patent Judge**.

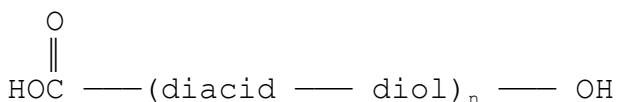
DECISION ON APPEAL

This is a decision on an appeal from the primary examiner's final rejection of claims 1, 2, 6, 7 and 9 through 14. Claims 3-5 and 15 are the only other claims pending in this application and stand withdrawn from further consideration by the examiner as being directed to a non-elected invention (Brief, page 2; final Office action dated June 18, 2001, Paper No. 8, page 3). We have jurisdiction pursuant to 35 U.S.C. § 134.

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According to appellants, the invention is directed to a purification process where a contaminated composition which includes a polycarbonate polymer and a specified impurity is contacted with an alumina adsorbent, with a portion of the impurity binding to the adsorbent (Brief, page 2). Illustrative independent claim 1 is reproduced below:

1. A purification process comprising: contacting a contaminated composition comprised of an optional fluid, a polymer, and an impurity with an adsorbent composition including an adsorbent, wherein the adsorbent is selected from the group consisting of an alumina and a magnesium sulfate, wherein a portion of the impurity binds to the adsorbent, wherein the polymer is a polycarbonate, a carbazole, a polyarylate, or a copolyester having the formula



where n is the degree of polymerization wherein the impurity is at least one of a salt, a polar material, and a surfactant.

The examiner has relied upon the following references as evidence of obviousness:

Tanaka et al. (Tanaka)	5,294,356	Mar. 15, 1994
McDaniel et al. (McDaniel)	6,077,978	Jun. 20, 2000
		(filed Sep. 17, 1997)

The claims on appeal stand rejected under 35 U.S.C.
§ 103(a) as unpatentable over Tanaka in view of McDaniel (Answer,

page 2). We **reverse** the examiner's rejection essentially for the reasons stated in the Brief and those reasons set forth below.

OPINION

The examiner finds that Tanaka discloses purifying a contaminated polycarbonate composition by contacting the composition with an inorganic adsorbent in order to remove basic catalyst residues such as sodium or potassium hydroxides (Answer, paragraph bridging pages 2-3). The examiner recognizes that Tanaka fails to disclose or suggest the use of alumina as the adsorbent material (Answer, page 3). Therefore, the examiner applies McDaniel for the teaching "that alumina is capable of adsorbing basic catalysts such as sodium hydroxide or potassium hydroxide (col. 1, lines 22-23) from a contaminated composition."

Id. From these findings, the examiner concludes that it would have been obvious to one of ordinary skill in the art to employ the alumina of McDaniel as the inorganic adsorbent material of Tanaka "since this secondary reference alumina is capable of adsorbing basic catalysts such as sodium hydroxide or potassium hydroxide from a contaminated composition in substantially the

same manner as the inorganic adsorbent material of the primary reference" (*id.*).

Appellants argue that the examiner has failed to establish with a reasonable expectation of success that the alumina adsorbent of McDaniel would be effective at separating an impurity of a salt, polar material and/or surfactant from the polycarbonate of Tanaka (Brief, page 4). Appellants emphasize that the ion exchange material of Tanaka is disclosed as being effective for separating basic substances from a polycarbonate while McDaniel's alumina adsorbent is disclosed as being effective for separating basic substances from a non-polycarbonate material (Brief, paragraph bridging pages 4-5).

In response to these arguments, the examiner submits that one of ordinary skill in the art would "readily recognize" that the alumina of McDaniel would have a greater affinity for sodium or potassium hydroxide than for the polycarbonate of Tanaka "for substantially the same reason" that this adsorbent has a greater affinity for these materials over the polyoxy-alkylene polyols of McDaniel (Answer, page 5). The examiner argues that since the alumina of McDaniel is "very similar" to

the inorganic adsorbents (e.g., zeolite, zirconium compound, acid clay, dolomite, etc.) disclosed by Tanaka as useful, there is no reason to believe that this alumina would interfere with the primary reference [Tanaka] purification process (*id.*). We disagree.

“When relying on numerous references or a modification of prior art, it is incumbent upon the examiner to identify some suggestion to combine references or make the modification. [Citation omitted].” ***In re Mayne***, 104 F.3d 1339, 1342, 41 USPQ2d 1451, 1454 (Fed. Cir. 1997). The examiner has failed to identify any convincing suggestion or factual evidence to substitute the alumina of McDaniel for the inorganic ion exchangers disclosed by Tanaka. The examiner has merely established that the impurity or contaminant of Tanaka and McDaniel is the same (basic substances such as sodium or potassium hydroxides) and concluded that an alumina adsorbent would have the same affinity in purifying the composition of Tanaka “for substantially the same reason” as in McDaniel (Answer, page 5). However, there is no evidence or technical reasoning, on this record, to support the examiner’s contention that alumina would act the same with the

polycarbonates of Tanaka as with the polyoxyalkylene polyols of McDaniel. ***See In re Lee***, 277 F.3d 1338, 1343-44, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002) ("This factual question of motivation is material to patentability, and could not be resolved on subjective belief and unknown authority.").

The examiner has failed to support the contention that the alumina of McDaniel is "very similar" to the inorganic adsorbents disclosed by Tanaka (Answer, page 5). Actually, Tanaka discloses "inorganic ion exchangers" (not adsorbents) as useful in the purification process (col. 33, ll. 42-45). The examiner has not established, on this record, that the alumina of McDaniel would have been considered an "inorganic ion exchanger" within the disclosure of Tanaka. Furthermore, the examiner has not established that the alumina of McDaniel is "very similar" to any of the inorganic ion exchangers specifically disclosed by Tanaka (col. 33, ll. 51-62), e.g., zirconium compounds or zeolite (an aluminosilicate tetrahedral framework with ion-exchangeable large cations) (see the Answer, page 5).¹

¹***See McGraw-Hill Dictionary of Scientific and Technical Terms***, 5th ed., p. 2188 (1994). Similarly, the definition of clay states that it is composed primarily of silica, alumina and water, often with iron, alkalies and alkaline earths (*id.*, p. 383) while dolomite is calcium
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For the foregoing reasons and those stated in the Brief, we determine that the examiner has failed to establish a ***prima facie*** case of obviousness in view of the reference evidence. Accordingly, we cannot sustain the examiner's rejection based on 35 U.S.C. § 103(a).

The decision of the examiner is reversed.

REVERSED

CHUNG K. PAK)	
Administrative Patent Judge)	
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)	
)	BOARD OF PATENT
CHARLES F. WARREN)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
)	
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THOMAS A. WALTZ)	
Administrative Patent Judge)	

TAW:psb

¹(...continued)
magnesium carbonate (*id.*, p. 602). The definition of alumina (aluminum oxide) fails to include any use as an ion exchange material (*see The Merck Index*, 12th ed., p. 63, Merck & Co., Inc., 1996).

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